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ABSTRACT

To analyze and compare specific oral communication behaviors of primary school pupils who score high on reading and language tests with those who score low, a study was conducted on approximatley 200 students who were classified as (1) high language, (2) high reading, (3) low language, or (4) low reading according to their scores on the Comprehensive Test of Basic Skills. Twelve students were then randomly selected from each of the four groups and videotaped interacting with a teacher and two other subjects of the study. Three trained observers separately viewed the videotapes and recorded the subjects' communication behavior using the Rieke Communication Model as the recording form. Data revealed that pupils who scored high on language and reading tests did not as a group exhibit significantly more nonverbal communications, vocalizations, or the use of words, phrases and sentences when compared to students who scored low on the same tests. In addition, it was shown that they did not initiate communications or respond more frequently in class, or ask significantly more questions. Directions for further research are suggested. In the meantime, the implications of this study suggest that teachers should make use of instructional materials that foster interaction and questioning techniques by their students, and deliberately use questions that elicit high level responses. (CRH)

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INITIATING AND RESPONDING COMMUNICATION BEHAVIORS OF PRIMARY PUPILS WHO SCORE HIGH COMPARED TO THOSE WHO SCORE LOW ON LANGUAGE AND READING TESTS

by

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Language is the cornerstone for communication and is the primary basis for new learning in school. Inability to communicate hampers the potential to cope with the most simple problems. The acquisition and modification of language is important, also, because a close relationship exists with intelligence, learning, and cognitive development (Liebert, Poulos, and Straus, 1974).

Chomsky (1966) wrote that language communication provides the primary means of spontaneous expression of thought and feeling. Whorf (1973) stated that every normal human, past infancy, can and does learn to talk. Language is related to thinking and thougnt depends upon logic, reason, and innate human capacities. Language becomes an important factor in rearing children because of its role in the transmission of culture.

For centuries, language has been viewed and studied in terms of grammar by analyzing the basic similarities between various languages (Chomsky, 1966; Hughes, 1971; Kitzhaber, Sloat, and Kolba, 1974; Pei, 1971; Whorf, 1973). Since the turn of the twentieth century, the study of language has expanded as the science of linguistics. Research, experimentation, discoveries, and analyses have brought many new insights into this field of study. Now separated from philosophy, linguistics is studied in various fields: anthropology, philosophy, sociology, psychology, and education. Application of this knowledge has

extended into etymology, foreign language, dialects, oratory, literature, grammar (traditional and transformational), cognitive development, sign language, spelling, phonics, phonetics, vocabulary development, reading comprehension, and speech development.

The study of language has evolved from the 16th Century emphasis on comparison and description to an emphasis in recent years on how a child learns language, the knowledge a child possesses about the language, and the child's use of language for communication. Roger Shuy (1977), a linguist, categorized language as grammar, phonology, sociolinguistics, pragmatics, and the ethnography of speaking. Grammar has been defined as a description of how a language is constructed (Larkin, 1977). Phonology describes the rules which account for the predictable aspects of pronunciation, whether they relate to alternate forms of the same morpheme or to different phonetic forms that a given sound can take (Wolfram, 1977). Sociolinguistics explains language variations rather than language universals. The concern is with language in a social context rather than in abstract representations, therefore possessing a high potential for application to other fields such as education, anthropology, sociology, and psychology (Shuy, 1977). Pragmatics refers to the relation between facts about the world and the language used to explain them (Griffin, 1977), and individual language use in social contexts (Bates, 1976). Ethnography of speaking is the study of language and speech in cultural and social contexts (Sherzer, 1977). Morehead and Morehead (1976) proposed three linguistic variations: phonology, syntax and semantics, and cognitive pragmatics.

In contrast to rule dominated description of language, Muma (1978), a disciple of cognitive theory, viewed language as three interdependent systems: cognitive, linguistic, and communication, with communication being the purpose of language. His emphasis was on the function, use, and communicative intent rather than knowledge of grammar or set of rules. Muma thought that the young child learns the native linguistic system. He raised the question whether the quality of a child's command of the communicative system has been addressed by linguists. Can the child use the language as differentiated from how much language does the child know. A child must be able to use language efficiently and communicate well.

In recent years, the study of language has evolved into a new framework. Whether one embraces Roger Shuy's (1977) pragmatics or John Muma's (1978) communication systems, the trend is on the function of language communication and on its mastery and utilization. This is in direct contrast to centuries of emphasis on the knowlege of syntax, lexicon, and phonetics.

Until recently, the classroom teacher taught language as the knowledge of the rules. Correctness of form and usage were emphasized. There has been a gradual change towards the newer views of linguistics, cognitive functioning, pragmatics, and communication systems. This trend is reflected in school textbooks, in legislation on language arts and bi-lingual programs.

There are, however, few empirical studies to guide the classroom teacher in curriculum planning. The literature reflects theory, views, and postulations. Much still needs to be discovered about language

study, communication, cognitive functioning and development, communication systems, sociolinguistics, pragmatics, semantics, syntax, and even grammar, in a more current concept of the word. Questions arise concerning applicability to curricula, such as, communication behaviors, pupil assessment, program planning and teaching techniques. Similarly, the relationship is being examined between language use or communication behaviors and academic achievement.

What does the literature say to the classroom teacher regarding oral language communication and the teaching of reading? How do the more recent trends affect teaching techniques and curricular choices? How can teachers identify and observe oral language skills? Can such skills enhance other learning programs? How do standardized reading and language tests, typically used in public elementary schools, compare with communication skills? Can reading skills be predicted by analyzing oral language skills?

The Problem

In response to the recent questions raised by scholars, analyses are needed to determine the extent to which primary pupils communicate orally in the classroom and how such skills relate to academic achievement, as typically measured by standardized language and reading tests. Answers to the following questions were sought:

1. Do pupils who score high on language and reading tests initiate communications and respond more frequently in class, use more phrases and sentences, and ask more questions, when compared to students who score low on the same tests?

2. Do pupils who score high on language and reading tests demonstrate initiating-responding profiles in the median (40% to 60%) range, while students who score low on the same tests show unbalanced profiles (above or below the balanced profile)?

3. Do pupils who score high on language and reading tests exhibit significantly more non-verbal communications, vocalizations, use of words, use of phrases, and use of sentences, when compared to students who score low on the same tests?

4. Do pupils who score high on language and reading tests ask significantly more questions in class, when compared to students who score low on the same tests?

These questions formed the bases for the four null hypotheses in this study.

Purpose of the Study

Few empirical studies are found in educational guidelines which address or reflect the newer trends in the study and teaching of language. Analyses were needed to determine the extent to which primary pupils used oral language communication skills and their level of interaction. Also needed were comparisons of oral language functioning and academic achievement in the language arts. The purpose of this investigation was to analyze and compare specific oral communication behaviors of primary pupils who score high on reading and language tests with those who score low. Analyses were made to determine the extent to which primary pupils used oral language communication skills in a simulated classroom setting and how such use related to academic

achievement as typically measured by standardized language and reading tests.

Definition of Terms

The following terms are defined according to their use in the investigation:

1. Balanced Communication Profile: Communication behavior scoring within the median (40% to 60%) range according to an observer's tallies.
2. Unbalanced Communication Profile: Communication behavior scoring outside the median (40% to 60%) range according to an observer's tallies.
3. Comprehensive Test of Basic Skills (CTBS): A standardized test utilized to measure school achievement including reading and language (CTB/McGraw Hill, 1974).
4. Communication Behavior: Verbal and non-verbal behaviors which can (1) be observed in a child, (2) be divided into two major categories of initiating and responding behaviors, and (3) be tallied on the Rieke Communication Model (Hayden & Delaney, 1975; Hayden & Rieke, 1975; Rieke, 1974).
5. Developmental Language Acquisition Sequence: The observed stages of the development of language: non-verbal communications, vocalizations, use of words, use of phrases, use of sentences, and use of questions, including non-responses.
6. High Language Pupils: Subjects who scored stanines 7, 8, and 9 on the CTBS Language Test.

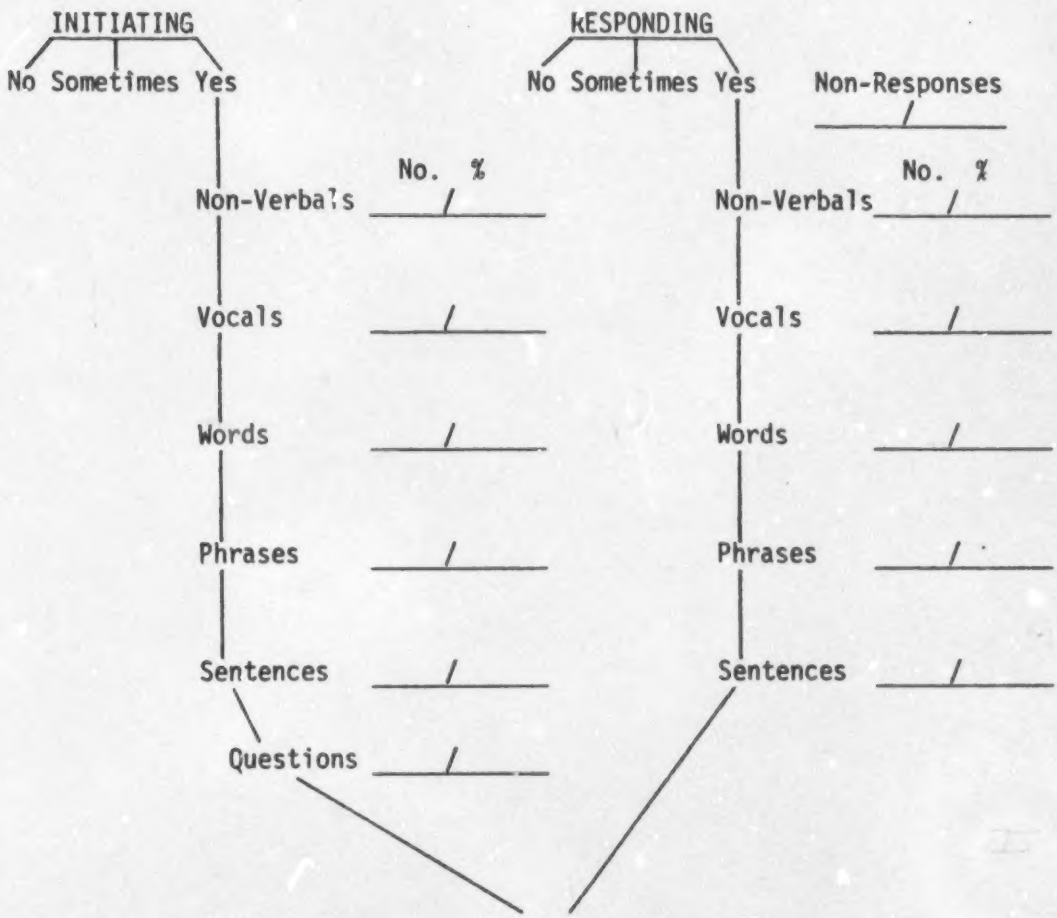
7. Low Language Pupils: Subjects who scored stanines 1, 2, and 3 on the CTBS Language Test.
8. High Reading Pupils: Subjects who scored stanines 7, 8, and 9 on the CTBS Reading Test.
9. Low Reading Pupils: Subjects who scored stanines 1, 2, and 3 on the CTBS Reading Test.
10. Initiating Behavior: Any observable initiating behavior which occurs spontaneously without anything having been said or done to get the child to do or say anything.
11. Responding Behavior: Any observable responding behavior which is elicited from the child, usually preceded by an event or question.
12. The Rieke Communication Model: A model developed at the Communication Preschool in the Experimental Education Unit at the University of Washington, Seattle, under the direction of Mrs. Jane Rieke (Hayden & Rieke, 1975). (See Table 1.)

Methods and Procedures

The basic design of this study can best be described as a comparison of specific oral communication behaviors of primary pupils who scored high on reading and language tests with those who scored low. Analyses were made to determine the extent to which primary pupils used oral language communication skills in a simulated classroom setting and how such use related to academic achievement, as typically measured by standardized reading and language tests.

TABLE 1

THE RIEKE COMMUNICATION MODEL



Total No. Initiations_____

% of Initiations_____

Total No. Responses_____

% of Responses_____

Total I & R_____

Can be understood_____

Is loud enough_____

Is too loud_____

Is appropriate_____

Other_____

*Mrs. Jane Rieke, Communication Preschool, Experimental Education Unit, University of Washington, Seattle, Washington, 1975.

The CTBS standardized test was utilized as the measurement of reading and language academic achievement. The Rieke Communication Model served as the observation instrument for communication behaviors exhibited in class.

An entire primary pupil population (approximately 200 students) was administered the CTBS Reading and Language Tests. Four categories of pupils were identified: high language, high reading, low language, and low reading. Twelve students were randomly selected (stratified, randomized sampling with no replacement) from each of the four groups. These forty-eight students served as the subjects of this study. Each subject was then videotaped interacting with a teacher and two other subjects of this study. A trained observer used the Rieke Communication Model as the recording form or observation instrument. The observer recorded each of the 48 subjects' communication behaviors on the videotapes. Two other trained observers served as "second judges" to verify rater-reliability (which was very high for purposes of this study). Application of the appropriate statistical analyses were completed on the data. The raw scores (frequencies) were converted into percentage scores. Then the Kruskal-Wallis Test, an Analysis of Variance by Ranks (McCall, 1975; Conover, 1971), was applied to test the hypotheses. This test is appropriate when there are several random samples, when hypothesis testing involves means, and when ordinal observations are involved. All three of these conditions prevailed in this study.

The Pearson chi square test, a non-parametric technique and test on independent sample (McCall, 1975), was also applied. The purpose of the use of this statistic was to compare independent and random samples

of observations in terms of their similarity with which the observations were distributed among several discrete and mutually exclusive categories.

The Kruskal-Wallis, an Analysis of Variance by Ranks, and chi square analysis were completed to answer the four questions and to test the four null hypotheses.

Results

Analyses of the data indicated that predictions of specific communication behaviors cannot be made, based on the reading and language stanine standardized test scores, utilizing the Rieke Communication Model (dependent variable) as a measure of communication behaviors and the CTBS test data (independent variables) as measures of reading and language skills. Regardless of how the subjects of this study scored on the CTBS Reading and Language Tests, the subjects demonstrated comparable communication behaviors. The distributions were similar. Data from the application of the Rieke Communication Model did not differentiate between the four types of categorized pupils, and there were no statistically significant differences in communication behaviors. An underlying assumption of this investigation that the Rieke Communication Model would differentiate was not substantiated or supported. The model may not be sensitive enough to measure the complexity of language communication behaviors of elementary school-aged students, while it is sensitive and appropriate for the preschoolers. The results, however, may be explained by the possibility that the subjects performed equally and the Rieke Communication Model accurately reported the similar results. Another possible explanation deals with the observation situation. The subjects

were interviewed in a pull-out situation, as opposed to an in-classroom setting. Additionally, pupils were aware of the videotape equipment, and, although they did not appear concerned, the effects are unknown.

Conclusions

Thus, the following conclusions can be made regarding the 48 subjects of this study:

1. Pupils who scored high on language and reading tests did not, as a group, initiate communications or respond more frequently in class, when compared to students who scored low on the same tests. Additionally, pupils who scored high on reading and language tests did not, as a group, exhibit higher levels of communication behaviors by more frequently using more phrases and sentences, and asking more questions, when compared to students who scored low on the same tests. As a group, the 48 subjects responded upwards to 74% of the time, while initiating communications upwards to 26% of the time.

2. Pupils who scored high on language and reading tests did not, as a group, demonstrate initiating-responding profiles in the median (40% to 60%) range, and students who scored low on the same tests did not, as a group, show unbalanced profiles (above or below the balanced profile range).

3. Pupils who scored high on language and reading tests did not, as a group, exhibit significantly more non-verbal communications, vocalizations, use of words, use of phrases, and use of sentences, when compared to students who scored low on the same tests.

4. Pupils who scored high on language and reading tests did not, as a group, ask significantly more questions in class when compared to students who scored low on the same tests. (In fact, students asked few questions, if any.)

The results of this study do not indicate that the measures, the CTBS Reading Test, the CTBS Language Test, and the Rieke Communication Model, measure the same aspects of language communication. The CTBS tests did differentiate between the four categories of pupils (high language, high reading, low language, and low reading), while the Rieke Communication Model did not; however, one cannot assume that the model did not validly and reliably measure communication skills. One explanation of the results is that all of the subjects of this study, regardless of how they scored on the CTBS tests, did indeed have communication skill needs or deficits. Analyses of the data indicate that both high and low scoring pupils demonstrated similar communication behaviors, as measured by the model. These results could indicate that little or insufficient meaningful interactions occurred in the interview situations, with few pupils being active participants.

Implications of this Study

This study, although not directly focused in the field of reading, does have implications to reading. It addresses several questions important to the elementary classroom teacher, such as the following:

What does literature say to the classroom teacher regarding oral language communication and the teaching of reading? How do the more

recent trends affect teaching techniques and curricula choices? How can teachers identify and observe oral language skills? Can such skills enhance other learning programs? What are the relationships between and among listening, speaking, and reading? How do standardized reading and language tests, typically used in public elementary schools, compare with oral language skills? And, ultimately, can reading skills be predicted by analyzing oral language skills, and vice versa?

This study attempted to shed some light and subsequently raised several questions for future research.

Future studies might investigate the quality and appropriateness of the questions asked by students, the manner in which questions are asked/contribute to the student's fund of knowledge and facilitate learning. (Questions should be appropriate to the topic and not extraneous.) Analyses of the environments to determine which more effectively encourage pupils to interact, to initiate communications, to ask questions, to fully utilize effective communication skills, are recommended. Further, if students are "trained" to ask questions and to initiate communication, can they generalize these communication behaviors so that creative, self-direction occurs? Future analyses are recommended.

Meanwhile, the teacher can plan the instructional program to encourage numerous and frequent opportunities to develop and enhance oral language communication skills. Students need to obtain a balance between initiating and responding behaviors, to utilize expressive and receptive communication skills for effective life-skills in our society.

There are several teaching techniques that lend themselves to increased teacher-pupil interaction and questioning by students, such as

the inquiry approach, the scientific method, and exploration of instructional materials, and the classroom teacher can make use of techniques and program materials that foster interaction and questioning techniques.

Additionally, the teacher can encourage pupils to utilize complete sentences when speaking in the learning situations or whenever formal language (Standard English) is indicated. The teacher can allow time in the school day, on an on-going basis, for the students to use and manipulate language in self-directed, creative ways, orally, in writing, and in reading.

The role of the teacher needs to be deliberately directed in eliciting higher level responses. For example, the interviewer in this study asked, "Have you ever had peaches before?" This type of question typically elicits low level responses, for example a yes or no response, or little interaction.

Finally, communication models may be more appropriately used with the preschool child, as opposed to the elementary school child. Possibly more advanced practical models can be developed, to measure and assess the language communication behaviors of elementary school children. Elementary school pupils should have the abilities and potentials to utilize effective receptive and expressive skills, to maximize communicative effectiveness. Any investigation to shed light on these processes would be a welcome addition to language instruction.

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